Little Man Inside Us

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The concept of *'homunculus'* ("*little man*" in Greek) was mentioned in psychology and brain anatomy in 19th century, specifically in brain mapping to different body parts. The brain is connected by many sensory and motor neurones. Hence, our brain sees two different homunculi in us - the sensory and the motor homunculus. Contrary to how we perceive ourselves, our brain could actually 'see' us as Gollum in Lord of the Rings.

The sensory homunculus has a figure with enlarged hand, face, genitals, and organ of special senses. These areas are more sensitive to surrounding stimuli. We use them to comprehend surroundings such as vision, audition, olfaction, and gustation. The motor homunculus, on the other hand, has a figure with enlarged hands, face, eyes, and mouth. These areas have higher performance capabilities in specific and defined movements. Therefore, we have a better control of hands for using tools and performing tasks such as writing.

Our brain has an ability termed neuroplasticity where it is able to change and restructure throughout life. Human brain has the incredible capability to reorganize or remap itself by forming new connections (synapses) between neurones (brain cells). In the event where a person loses a limb or born without one, neuroplasticity allows the neurones to adjust their activities in response to new situations or to changes in their brain. Through this process, their motor function loss will be remapped during the course of rehabilitation and they will gain new skills such as writing with their feet.


MOTOR
HOMUNCULUS
This cortical homunculus is a proportionate representation of the brain's dedication to the parts of the body responsible for motor functionality.
SENSORY
HOMUNCULUS
This cortical homunculus is a visual representation of the brain's dedication to the sensing of information of each body part.


SENSORY
HOMUNCULUS


REMAPPED
HOMUNCULUS
This cortical homunculus is based on the concept of neuroplasticity in which cortical remapping is possible in response to injury.
MOTOR
HOMUNCULUS